

**ABSTRACT**

A data regenerator for regenerating a data signal, including a convertor for converting a received data signal into a binary data signal in dependence on conversion parameters, an error corrector for correcting errors in the binary data signal based on error correction code contained in the binary data signal to produce a corrected binary data signal, and a performance monitor for comparing the corrected binary data signal with an uncorrected representation of the binary data signal to determine information about the relative number of logic "1"s and logic "0"s that have been corrected by the error corrector and output a feedback signal representative of the relative number, wherein the convertor adjusts at least some of the conversion parameters in dependence on the feedback signal.